

Amendment to Claims

1-10 (canceled).

11 (original). In a multi-tasking computer system comprising a plurality of resources to be shared by a plurality of tasks, a circuit for allocating each resource to the tasks so that after any one of the tasks has finished accessing any one of the resources in processing a data unit, the task does not get access to the same resource until after every other one of the tasks has finished accessing the resource.

12 (original). The circuit of Claim 11 wherein for at least one resource, each task starts accessing the resource by locking the resource to make it unavailable to any other task, and the task finishes accessing the resource by unlocking the resource.

13 (original). A method for sharing a plurality of resources by a plurality of computer tasks, the method comprising:

allowing a task T1, which is one of the tasks, to access all of the resources, and disallowing any other task from accessing any one of the resources; and

for each resource, after the task T1 has finished accessing the resource, allowing another task to access the resource, and disallowing the task T1 from accessing the resource until every other task sharing the resource has finished accessing the resource.

14-29 (canceled).

30 (new). The circuit of Claim 11 wherein each data unit is processed by a single one of the tasks which accesses at least two of said resources to process at least one of the data units.

31 (new). The circuit of Claim 30 wherein said at least two resources are storage areas each of which is to store data unit processing information of multiple data units.

32 (new). The circuit of Claim 31 wherein one of the storage areas is a request FIFO for storing requests to process data units, and another one of the storage areas is a command FIFO for storing commands for processing of the data units;

wherein for each data unit, one of the tasks reads a request from the request FIFO and, if one or more commands are to be written to the command FIFO for the data unit, said one of the tasks writes the one or more commands to the command FIFO.

33 (new). The circuit of Claim 32 wherein each request contains an address of a corresponding data unit.

34 (new). The circuit of Claim 31 wherein at least some of the data units are received over a network, wherein one of the storage areas is a request FIFO for storing requests to process the data units, and another of the storage areas is a status FIFO for storing status information on reception of the data units over the network;

wherein for each data unit, one of the tasks reads a request from the request FIFO and reads the status information from the status FIFO.

35 (new). The method of Claim 13 wherein for at least one resource, each task starts accessing the resource by locking the resource to make it unavailable to any other task, and the task finishes accessing the resource by unlocking the resource.

36 (new). The method of Claim 13 wherein each data unit is processed by a single one of the tasks which accesses at least two of said resources to process at least one of the data units.

37 (new). The method of Claim 36 wherein said at least two resources are storage areas each of which is to store data unit processing information of multiple data units.

38 (new). The method of Claim 37 wherein one of the storage areas is a request FIFO for storing requests to process data units, and another one of the storage areas is a command FIFO for storing commands for processing of the data units;

wherein for each data unit, one of the tasks reads a request from the request FIFO and, if one or more commands are to be written to the command FIFO for the data unit, said one of the tasks writes the one or more commands to the command FIFO.

39 (new). The method of Claim 38 wherein each request contains an address of a corresponding data unit.

40 (new). The method of Claim 37 wherein at least some of the data units are received over a network, wherein one of the storage areas is a request FIFO for storing requests to process the data units, and another of the storage areas is a status FIFO for storing status information on reception of the data units over the network;

wherein for each data unit, one of the tasks reads a request from the request FIFO and reads the status information from the status FIFO.